

10/518001 *14*

SEQUENCE LISTING

<110> EBL GmbH

<120> Method for the production of protamine

<130> Protamine

<140>

<141>

<160> 36

<170> PatentIn Ver. 2.1

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<212> DNA

<213> Oncorhynchus mykiss

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<222> (1) .. (99)

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sequence

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Met	Pro	Arg	Arg	Arg	Arg	Ser	Ser	Ser	Arg	Pro	Val	Arg	Arg	Arg	Arg	
1				5				10				15				

cgc	ccc	agg	gtg	tcc	cga	cgt	cgt	cgc	agg	aga	gga	ggc	cgc	agg	agg	96
Arg	Pro	Arg	Val	Ser	Arg	Arg	Arg	Arg	Arg	Arg	Gly	Gly	Arg	Arg	Arg	
			20				25					30				

cgt	tag															102
Arg																

<210> 2

<211> 33

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<213> Oncorhynchus mykiss

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sequence

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Arg

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atg ccc aga aga cgc aga tcc tcc aga cca cct gtc cgc agg cgc cgc 48
Met Pro Arg Arg Arg Arg Ser Ser Arg Pro Pro Val Arg Arg Arg
1 5 10 15

cgc ccc agg gtg tcc cga cgt cgt cgc agg aga gga ggc cgc agg agg 96
Arg Pro Arg Val Ser Arg Arg Arg Arg Arg Arg Gly Gly Arg Arg Arg
20 25 30

cgt tag 102
Arg

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<213> Oncorhynchus mykiss

<220>
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sequence

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1 5 10 15

Arg Pro Arg Val Ser Arg Arg Arg Arg Arg Arg Gly Gly Arg Arg Arg
20 25 30

Arg

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Met Pro Arg Arg Arg Arg Ser Ser Arg Arg Pro Val Arg Arg Arg Arg
1 5 10 15

cgc	ccc	agg	gtg	tcc	cga	cgt	cgt	cgc	agg	aga	gga	ggc	cgc	agg	agg	96
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cgt	tag	102
Arg		

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Arg

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1				5					10					15		
cgc	gcc	agg	gtg	tcc	cga	cgt	cgt	cgc	agg	aga	gga	cgc	cgc	agg	agg	96
Arg	Ala	Arg	Val	Ser	Arg	Arg	Arg	Arg	Arg	Arg	Gly	Arg	Arg	Arg	Arg	
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cgt	tag	102
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20 25 30

Arg

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1 5 10 15

cgc ccc agg gtg tcc cga cgt cgt cgc agg aga gga cgc cgc agg agg 96
Arg Pro Arg Val Ser Arg Arg Arg Arg Arg Arg Arg Gly Arg Arg Arg Arg
20 25 30

cgt tag 102
Arg

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<213> Oncorhynchus mykiss

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Arg

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1 5 10 15

cgc cct agg gtg tcc cga cgt cgt cgc agg aga gga ggc cgc agg agg 96
Arg Pro Arg Val Ser Arg Arg Arg Arg Arg Arg Gly Gly Arg Arg Arg
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cgt tag 102
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 Met Pro Arg Arg Arg Arg Ser Ser Ser Arg Pro Val Arg Arg Arg
 1 5 10 15
 cgc gcn agg gtg tcc cga cgt cgt cgc agg aga gga ggc cgc agg agg 96
 Arg Ala Arg Val Ser Arg Arg Arg Arg Arg Arg Gly Gly Arg Arg Arg
 20 25 30
 cgt tag 102
 Arg

<210> 14
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 <212> PRT
 <213> Oncorhynchus mykiss

<220>
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<400> 14
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 1 5 10 15
 Arg Ala Arg Val Ser Arg Arg Arg Arg Arg Arg Gly Gly Arg Arg Arg
 20 25 30

Arg

<210> 15
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 1 5 10 15
 ccc agg gtg tcc cga cgt cgc agg aga gga ggc cgc agg agg cgt tag 96

Pro Arg Val Ser Arg Arg Arg Arg Arg Gly Gly Arg Arg Arg Arg
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1 5 10 15

ccc agg gtg tcc cga cgt cgc agg aga gga ggc cgc agg agg cgt tag 96
Pro Arg Val Ser Arg Arg Arg Arg Arg Gly Gly Arg Arg Arg Arg
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1 5 10 15

Pro Arg Val Ser Arg Arg Arg Arg Arg Gly Gly Arg Arg Arg Arg
20 25 30

<210> 19

<211> 102

<212> DNA

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1 5 10 15

cgc cgc ccc agg gtg tcc cga cgt cgc agg aga gga ggc cgc agg agg 96
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cgt tag 102
Arg

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<212> PRT

<213> Oncorhynchus mykiss

<220>

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<400> 20

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1 5 10 15

Arg Arg Pro Arg Val Ser Arg Arg Arg Arg Arg Gly Gly Arg Arg Arg
20 25 30

Arg

<210> 21

<211> 96

<212> DNA

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1 5 10 15

cgc ccc agg cgc gtg tcc cga cgt cgt cgc gca cgc cgc agg agg tag 96
Arg Pro Arg Arg Val Ser Arg Arg Arg Arg Ala Arg Arg Arg Arg
20 25 30

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<400> 22
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Arg Pro Arg Arg Val Ser Arg Arg Arg Arg Ala Arg Arg Arg Arg
20 25 30

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1 5 10 15

cgc cgc ccc agg cgc gtg tcc cga cgt cgt cgc gca cgc cgc agg agg 96
 Arg Arg Pro Arg Arg Val Ser Arg Arg Arg Arg Ala Arg Arg Arg Arg
 20 25 30

tag 99

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 <213> Clupea harengus

<220>
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 sequence

<400> 24
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 1 5 10 15
 Arg Arg Pro Arg Arg Val Ser Arg Arg Arg Arg Ala Arg Arg Arg Arg
 20 25 30

<210> 25
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 sequence

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 Met Ala Arg Arg Arg Arg Ser Ser Ser Arg Pro Ile Arg Arg Arg Arg
 1 5 10 15
 ccc agg cgc cgg acc aca cgt cgt cgc agg gca ggc cgc agg agg cgt 96
 Pro Arg Arg Arg Thr Thr Arg Arg Arg Arg Ala Gly Arg Arg Arg Arg
 20 25 30

tag 99

<210> 26
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<220>
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<400> 26
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 1 5 10 15

Pro Arg Arg Arg Thr Thr Arg Arg Arg Arg Ala Gly Arg Arg Arg Arg
20 25 30

<210> 27
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aggcgcskgw ccmsacgtcg tcgcaggaga gsasgccgca ggaggcgta g 111

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<211> 102
<212> DNA
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<212> DNA
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<220>
<223> Description of Artificial Sequence: consensus 3

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tcgcgcgcgc gccggcgccg cggcggccgc cggcgccgct ga 102

<210> 30
<211> 102
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<210> 31
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<220>
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tcgcgcgcgc gccggcgccg cggcggaacgc cgtcgccggt ga 102

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<212> DNA
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<221> misc_feature

<222> 2

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<220>

<221> misc_feature

<222> 6

<223> X= zero or R

<220>

<221> misc_feature

<222> 7

<223> X=zero or T or S

<220>

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<223> X=zero or R or S

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sequence

<400> 33
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1 5 10 15
Arg Arg Xaa Xaa Arg Xaa Xaa Xaa Xaa Arg Arg Arg Xaa Xaa Xaa Xaa
20 25 30
Arg Arg Arg Xaa
35

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sequence for expression of Protamine

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<223> Bam HI restriction site

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<223> ebl 1 gene

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1
ctg ccg acc gct gct gct ggt ctg ctg ctc ctc gct gcc cag ccg gcg 102
Leu Pro Thr Ala Ala Gly Leu Leu Leu Ala Ala Gln Pro Ala
5 10 15 20
atg gcc atg ccg cgg cgt cgg cgt agc tcc agc cgt cca gtg cgt cgc 150

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Met Ala Met Pro Arg Arg Arg Arg Ser Ser Ser Arg Pro Val Arg Arg
      25              30              35

cgt cgc cgc ccc cgt gtc tcg cgc cgc cgc cgg cgc cgc ggc gga cgc 198
Arg Arg Arg Pro Arg Val Ser Arg Arg Arg Arg Arg Arg Gly Gly Arg
      40              45              50

cgt cgc cgt tgaggaatta attcggatcc 227
Arg Arg Arg
      55

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<210> 35
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<220>
 <223> Description of Artificial Sequence: cloning
 sequence for expression of Protamine

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<400> 35
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  1              5              10              15
Ala Gln Pro Ala Met Ala
      20

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<210> 36
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 <212> PRT
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<220>
 <223> Description of Artificial Sequence: cloning
 sequence for expression of Protamine

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<400> 36
Met Pro Arg Arg Arg Arg Ser Ser Ser Arg Pro Val Arg Arg Arg Arg
  1              5              10              15
Arg Pro Arg Val Ser Arg Arg Arg Arg Arg Arg Gly Gly Arg Arg Arg
      20              25              30

Arg

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